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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,483	11/12/2003	Forrest B. Fencil	S002-P02005US	7587

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EXAMINER
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MCKANE, ELIZABETH L

ART UNIT	PAPER NUMBER
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1744

DATE MAILED: 09/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/706,483	Applicant(s) FENCL ET AL.	
	Examiner Leigh McKane	Art Unit 1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-71 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-32, 70 and 71 is/are allowed.
- 6) ☒ Claim(s) 33-41, 44, 46-54, 57, 59, 60 and 65-69 is/are rejected.
- 7) ☒ Claim(s) 42, 43, 45, 55, 56, 58 and 61-64 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>111203</u> . | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 38 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In line 13 of the claim, the phrase “attached to one of the fixture walls” renders the claim vague and indefinite because the drawings illustrate the tube holder attached to the base, not the fixture walls.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 33-41 and 46-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurtz et al (U.S. Patent No. 5,660,719) in view of Block (*Disinfection, Sterilization, and Preservation*, 4<sup>th</sup> edition).

With respect to claims 33, and 46-49, Kurtz et al teaches a germicidal system resistant to environmental exposure wherein the system includes a germicidal tube 20, a power supply 32 receiving power from an external source (col.5, lines 3-11) and providing power to the tube 20, an electrical interface 95,96 electrically connecting an electrode of the stem and the power supply via plural wires 93 (Figure 5), a fixture 10 supporting the power supply and the germicidal tube, a cover adapted to ruggedize the electrical interface comprising, a stainless steel exterior surface. Moreover, it is disclosed that the fixture is

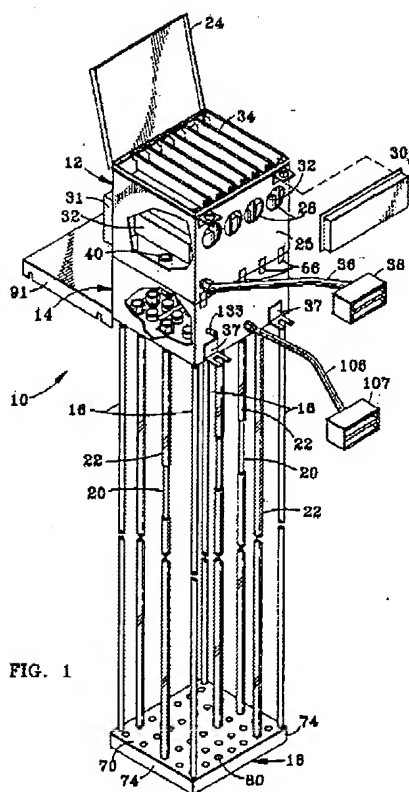
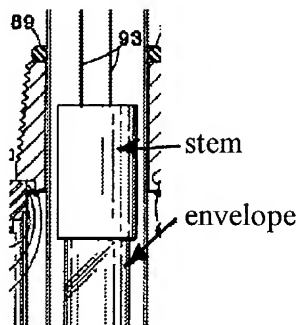


FIG. 1

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sealed to be “water resistant” as defined by NEMA Standard 250. See col.5, line 60 and col.6, lines 10-25.

Although Figure 5 of Kurtz et al depicts a tube having an envelope and stem, there is no disclosure that the germicidal tube includes a gas enclosed by the envelope and stem.



Block discloses that the “most practical method of generating UV radiation is by passage of electric discharge through low-pressure mercury vapor enclosed in special glass tubes, known commercially as germicidal lamps.” See page 555, first paragraph under “Germicidal Lamps”.

It is deemed obvious to one of ordinary skill in the art to use a gas (mercury vapor enclosed) by the envelope and stem of Kurtz et al, as this is “the most practical method of generating UV radiation.”

As to claims 34 and 36, the cover **24** and the wall **39** both are coupled by hinges to the fixture and enclose the electrical interface.

With respect to claim 35, Kurtz et al discloses that both cover **24** and wall **39** create a waterproof enclosure. See col.2, lines 1-9 and lines 32-37; col.5, lines 32-35; col.6, lines 3-4.

As to claims 37 and 50, Kurtz et al teaches that the fixture is formed of stainless steel and is "intended for indoor or outdoor use". Absent further limitations, the Examiner takes the position that stainless steel is "thick and rigid."

With respect to claims 38, 41, 51, and 54, the fixture **10** of Kurtz et al further includes a base (formed by the side walls of enclosure **14** and bottom wall **50**) adapted for mounting on an external surface of a wall **91** and including an opening **62** through which the envelope of the tube is passed for installation of the tube in the fixture, whereby installation of the tube in the fixture couples the tube to the fixture, and a wall **39** coupled to the base to define an interior space. The fixture of Kurtz et al further includes a tube holder **85**, attached to the base for holding the tube **20**.

As to claims 39, 40, 52, and 53, wall **39** is separable from the base in a clamshell configuration. See Figure 4.

7. Claims 44 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurtz et al and Block as applied to claims 38 and 51 above, and further in view of Wiesmann (U.S. Patent No. 5,151,174).

Kurtz et al with Block fails to disclose if the UV lamp emits UVC radiation. However, Wiesmann discloses a similar apparatus for UV fluid treatment wherein the UV lamps emit UVC radiation. As UVC radiation is germicidal and has been shown to be effective in the same field of endeavor as Kurtz et al, it would have been obvious to employ therein.

8. Claims 59, 60, and 65-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurtz et al in view of Wiesmann.

With respect to claims 59, 60, and 65-67, Kurtz et al teaches a germicidal lamp

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including a means **20** for emitting UV radiation including an envelope and a stem, a fixture **10** including a means (waterproof seal in the interior of compartment **14**) for sealing against wall **12**, means **56** for opening and separating the fixture, means **68** for sealing the fixture to prevent water from entering the interior space of the fixture, means **62** for allowing the emitting means to be passed through the fixture, means for sealing the fixture from air flowing into the fixture (col.2, lines 47-49), and means for engaging **84** and securing the emitting means.

Kurtz et al is silent with respect to the UV lamp emitting UVC radiation. However, Wiesmann discloses a similar apparatus for UV fluid treatment wherein the UV lamps emit UVC radiation. As UVC radiation is germicidal and has been shown to be effective in the same field of endeavor as Kurtz et al, it would have been obvious to employ therein.

With respect to skin-effect cooling, the apparatus of Kurtz et al is immersed in fluid and thus, is able to withstand skin-effect cooling.

As to the weight of the lamp, this limitation is not patentably significant since it at most relates to the size of the article under consideration, which is not ordinarily a matter of invention. In re Yount, 36 C.C.P.A. (Patents) 775, 171 F. 2d 317, 80 USPQ 141.

As to claims 68 and 69, since the waterproof sealing means meets NEMA Standard 250 and the enclosure is designed to be closed to ambient air, it is deemed to be capable of withstanding air pressure of at least 30 inches water gauge.

*Allowable Subject Matter*

9. Claims 42, 43, 45, 55, 56, 58, and 61-64 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: The combination of Kurtz et al with Block or Wiesmann fails to teach or suggest:

a) an electrical connector which engages at least one electrode in the stem of the tube *when the tube holder/supporting means engages the stem* or b) a UVC unit that can withstand skin-effect cooling in an air flow of between 200 and 600 cfm at between 30 and 65 °F.

11. Claims 1-32, 70, and 71 are allowed.

12. The following is an examiner's statement of reasons for allowance: Kurtz et al with Block or Wiesmann fails to teach or suggest a) the combination of cover, base, and tube holder as set forth in claims 1 and 22, wherein the base includes means for tube installation and means for sealing on a lower surface to a wall, b) tube having a flanged stem, or c) an air handling or HVAC system employing the germicidal lamp, as Kurtz et al is disclosed to be used in a liquid environment.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."



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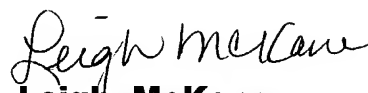
*Conclusion*

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leigh McKane whose telephone number is 571-272-1275.

The examiner can normally be reached on Monday-Wednesday (7:15 am-4:45 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Warden can be reached on 571-272-1275. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**Leigh McKane**  
**Primary Examiner**  
**Art Unit 1744**

elm  
3 May 2004